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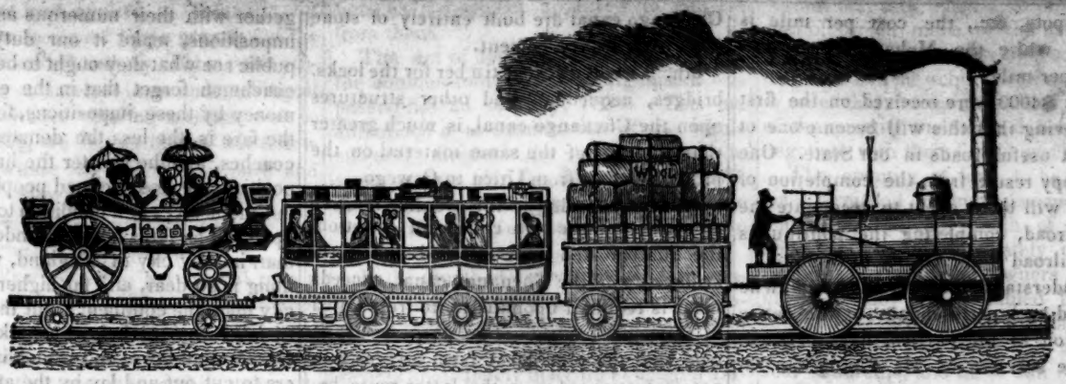

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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D. K MINOR, and GEORGE C. SCHAEFFER, } EDITORS AND PROPRIETORS.] SATURDAY, AUGUST, 13 1836. [VOLUME V.—No. 32.

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AMERICAN RAILROAD JOURNAL.

NEW-YORK, AUGUST 13, 1836.

Owing to delay in preparing the wood cuts, the article on the "Thames Tunnel," commenced in No. 14, has not been continued until this No.

Other articles of great length, have also prevented the insertion of portions of it.

UTICA AND SCHENECTADY RAILROAD.

We congratulate the public in general and all lovers of fine scenery in particular, upon the opening of this road. On Monday, August the first, a large party of gentlemen, the Vice President among the number, left Albany by the Hudson and Mohawk Road, in a train of cars between two engines, as far as the summit, from which we descended with one. After a short delay at Schenectady, the party were seated in twenty cars, ten of which, taken by each locomotive, soon began to whirl away.

The company have erected a bridge over the Mohawk, of considerable length. In the bank beyond, a deep cut is being made for the direct line of the road, which meanwhile follows the cut for the Saratoga road.

Throughout the whole length the grades are very moderate, and the journey can be performed in a very short time. Owing to some delay on this occasion, we did not reach Utica until half past two, or three o'clock.

The Uticensians have probably never received so many visitants in one hour's time—the town seemed literally to overflow with people.

The depot at Utica, as well as that at Schenectady, is most admirably arranged, the car-houses, work-shops, &c., being so situated, that each has the best location for its own use, and at the same time, the relative position of the buildings is perfectly symmetrical.

We returned on Tuesday, leaving Utica at 8 o clock, with about 300 passengers—this being the first regular trip upon the road.

From the length of the train, and some other circumstances incident to an untraveled road—such as stiffness of machinery and cars—we did not arrive at Schenectady until half past two, though we are confident that with the same number of passengers the trip can be made in less than four hours. In fact, the train that left Utica on Monday afternoon at 4 o'clock, arrived at Schenectady at 8 o'clock: making about 3 hours running time. Notwithstanding this delay, having left Utica on Tuesday, at 8 A. M., we arrived in New-York on Wednesday, at half past 5 A. M.—time actually employed in going, 19½ hours.

From the nature of the location of this road, it is mostly an embankment—keeping the bottom lands, and still elevated above the highest freshets that ever occur.

Almost every one is familiar with the fine scenery of this most beautiful valley, but we have never seen it to such advantage as on the day of our return on the railroad. The rapid presentation to the eye of striking points in the view, strongly reminded us of a moving panorama.

The rich scenery around Utica first presented itself, with its hills gradually meeting in advance of us, and with the rapid motion it was not too difficult to imagine that they were closing in upon us. The village of Herkimer next comes to view, and from this point, there is a fine view up the valley of the West Canada, seeming to give an earnest of the beauty of Trenton falls.

The valley now narrows, the road having crossed the stream by a fine bridge. The hills now seem to shut out all ingress, and one unacquainted with the spot is puzzled to find how the canal, river and railroad are to penetrate. A point is turned showing the village of Little Falls, its mills appearing as if washed by some mighty freshet into the bed of the stream.

The tourist having his doubts for a moment dispersed, is again confined by another embrace of the hills, and directly in the midst of them, with hardly the appearance of an oulet either way.

At this place the road itself is an object of great interest, at one moment passing through a space of rock, and at the next, hanging to the side of the b nk by the firmness of its own structure.

The road now leaves the gorge, and crosses the plain, the character of the scenery remaining similar, until at the Nose, where another pass charms the eye by its surprises.

We consider that the construction of this road reflects great credit upon the Directors, Engineers and Superintendant. Mr. Young, assisted by Messrs. Higham & Lee, has the credit of having completed one of the most essential routes in our chain of railroad.

The cheapness of the road is in agreeable contrast with other works in the same region.

It was necessary, in compliance with an act of legislature, to purchase the turnpike, for which the sum of $64,000 was given. Including this, machinery, eight locomo-

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tives, depots, &c., the cost per mile is $20,000; while the Mohawk road cost $60,000 per mile.

Nearly $4000 were received on the first day—proving that this will become one of the most useful roads in our State. One most happy result from the completion of this road will be its effect to accelerate the western road, completing the continuous line of railroad from Albany to Buffalo.

We understand that Mr. Davison, who has acted as superintendant to the entire satisfaction of all parties, has resigned, while the services of Mr. Young are retained.

D. K. Minor :—

Sir—In the Railroad Journal of the 16th ult., is an article from the New-York American, over the signature of "M," from which the following is an extract:

"The *Ship or Steamboat* canal surveyed by E. F. Johnson, Esq., between Utica and Oswego, is estimated for a canal of 90 feet width of surface and 8 feet deep, and has 180½ feet of lockage; the distance is 92½ miles, and the aggregate estimate is $1,131,989, which is at the rate of only $12,237 71/100 per mile. I wish to inquire if whether there may not be some error in this estimate? and if it be possible to construct a Ship canal of these dimensions, at a less sum than $12,500 per mile? This estimate is but little more than one half the cost of construction of the Chenango canal with wood locks, is less than half the cost of the construction of the Utica and Schenectady railroad, and if I am rightly informed, about one fourth of the cost of the railroads that lead in three directions from the city of Boston."

Had the writer of the preceding examined Mr. Johnson's Report and the Reports upon the Chenango canal with the attention which an honest minded man would have done, before calling in question, in so public a manner, the accuracy of Mr. Johnson's estimates he would have found,

1st, That the route on which the estimate was made from Utica to Oswego, comprised *fifty seven* miles of *Lake and improved River* navigation, leaving but *thirty five and two third miles of artificial canal, ten and a half miles only* of which was *new canal.*

2nd. That the total amount of lockage upon the Chenango canal was, between 1000 and 1100 feet, being nearly or quite six times the total amount of lockage on the proposed canal from Utica to Oswego.

3rd. That the locks upon the Chenango canal are not "*wood locks,*" but are built *principally of stone,* a portion being laid in cement and the remainder dry wall, with a timber and plank lining to the chambers; the dimensions of the walls not being materially different from what would be required for an entire stone lock.

4th. That some of the locks upon the Chenango canal are built entirely of stone laid in Hydraulic cement.

5th. That the cost of timber for the locks, bridges, acqueducts and other structures upon the Chenango canal, is much greater than the cost of the same material on the proposed route from Utica to Oswego.

6th. That owing to the peculiar relative situations of the two canals in question, the number and cost of road and farm bridges upon the Chenango canal, exceeds what is required upon the route from Utica to Oswego, for the same purpose. It is true that the erection of farm bridges was not contemplated upon the latter route, being incompatible with the character of the navigation, but damages were entered in the estimate for their omission, which would more than cover the cost of their construction.

7th. That the expense of constructing necessary Reservoirs, Feeders &c., for the supply of the Chenango canal, constitutes a *prominent* item in the cost of that work, and that it is distinctly stated in Mr. Johnson's report pages 31 and 47, that this item of expense on the poposed canal, from Utica to Oswego, was not embraced in his estimate; surveys for the purpose were contemplated, but "want of time and other circumstances prevented their execution."

The cost per mile from Utica to Oswego of that portion which is *actually* canal, including lockage, will therefore far exceed $12,237 71/100, the amount stated in the communication of "M."

On page 2d, of Mr. Johnson's report, will be found the following. "In calculating the quantity and value of labor and materials, I have endeavored to give each their full value, so that should the canal be constructed *before any important change shall take place in the current value of those articles,* the cost will not differ materially from the result as stated in the estimate."

The recent extraordinary advance in the price of provisions and labor, and in the value of land and materials, will render it proper to augment proportionately, the sum total in his estimate, and when so augmented the cost will be *less* than that of any navigable communication which can be found in the United States of equal extent, dimensions and importance.

In conclusion, I will add, that the Ontario and Hudson canal when opened, on a scale equal to, or larger, than that contemplated, will, in connexion with the proposed Niagara canal be found of more importance to the commercial interests of the States, and Territories west, and the States east, than any other navigable communication which can be found between the Atlantic and the Lakes. Utica.

August —— 1836.

The following article, from the New-York Express, may be of service to some of our readers. Every one who visits New-York should understand, and be governed by it, when using a Hack.

HACKNEY COACHMEN.

The difficulties constantly increasing between the Hackney coachmen of this city and our citizens, as well as strangers, together with their numerous and enormous impositions, make it our duty to let the public see what they ought to be paid. The coachmen forget that in the end they lose money by these impositions, for the dearer the fare is, the less the demand will be for coaches, and the greater the liability to imposition, the less inclined people will be to put themselves in a condition to be imposed upon. The fares now demanded are higher than in any city in England, where every thing is so dear, and far higher than in any city upon the continent: but the fares fixed by law, we copy below, as taken from the Corporation laws, and we advise our readers to cut out and lay by the article for the purpose of using it when occasion demands.

Five dollars are often demanded for taking strangers from one hotel to another, when the hotels are full, but the privilege of keeping the carriage *all day,* and of going to and returning from Kingsbridge, costs but five dollars. Passengers, under the Corporation laws, can go to Harlem and return, with the privilege of remaining three hours, for five dollars.

The price to 86th street, for one passenger, remaining one hour, and returning is two dollars, and for every additional passenger fifty cents.

The price for one passenger to 61st street, and remaining three quarters of an hour and returning, $1 50; every additional passenger, 37½ cents.

To Fortieth street, remaining half an hour and returning, $1; every additional passenger 25 cents.

To the new Alms house and returning, 75 cents, and for every additional passenger and returning, 37½ cents.

To conveying a passenger any distance exceeding a mile, and within two miles, 50 cents; and for every additional passenger, 25 cents.

To conveying a passenger any distance not exceeding one mile, 25 cents; and for every additional passenger, 25 cents.

The Hackney coach for the hour with one or more passengers, with the privilege of going from place to place and of stopping,—costs for the first hour $1, for the second hour 75 cents, and for every succeeding hour 50 cents.

The Hackney coachman has no legal right to demand or to receive any pay for the conveyance of a passenger, unless the number of the carriage and the rates of fare are fixed upon the carriage.

There is a penalty of $10 for asking a larger price than the law entitles the coachman to. A penalty of $10 is also inflicted upon the driver of a coach, when on any of the public stands, or whilst waiting for employment, when tendered his fare, if he refuses to carry any person or persons to any place or places on the island of New-York.

Every driver or owner of a Hackney coach or carriage, is under a legal obligation to carry upon his coach with his passenger one trunk, or other article used for travelling, without compensation therefor, and for every article more than one, he is entitled to 6 cents, for one mile, and if more, to 12½ cents.

We have been applied to frequently for information in regard to the progress of the "Water Works," both by citizens and others, taking an interest in an undertaking of such magnitude. During a recent visit to Philadelphia, we felt jealous of our fellow citizens, where we beheld the pure and sparkling water poured over the streets in every direction, and tempering the heat of an otherwise insupportable day.

The following is the first official report, that we have seen published since the commencement of the undertaking. We hope that the difficulties may be removed forthwith, and that we may safely enjoy the pleasure of the introduction of that purest of all streams, the Croton—in anticipation at least.

BOARD OF ALDERMEN.

August 1, 1836.

The following communication was received from the water commissions, which was laid on the table, and 500 copies ordered printed.

J. MORTON, clerk.

—

To the honorable the common council of the city of New York.

The water commissioners beg leave to lay before the common council a brief statement of the situation and progress of the great work they are engaged in, commencing at the date of their first entering upon the duties of their office, and continuing down to the present period. They have deemed this expose necessary, both for the information of the citizens generally, as well as that of your honorable body; the first being the source from whence the means are derived, and the second the legal check upon any improper use of those means.

Under the temporary act of the legislature, passed the 26th of February, 1833, the commissioners were only authorised to examine the feasibility and expense of supplying this city with pure and wholesome water, and by the authority given them by this act, they appointed Canvass White and David B. Douglas, esquires, civil engineers, to ascertain whether any of the streams or rivers, in the county of Westchester, would afford such supply, and the practicability and expense of introducing it. Mr. White, however, was prevented by sickness from performing his portion of the work, and it devolved on Mr. Douglas to make the necessary examinations. He reported to the commissioners on the first of Nov. 1833, that the Croton was the proper source; the quantity ample, the practicability of introducing it undoubted, the cost about five millions of dollars, and the time required about five years. He furnished them at the same time, with a large map of the country designating the several trial levels he had run, and the line finally fixed upon for the aqueduct from the Croton to the Harlem river, and from thence to the several reservoirs on the island of New York. On the 12th of November, the commissioners reported these facts to the common council, with such observations as the subject appeared to call for from them.

The act of the legislature, under which the commissioners are now organised, was passed the 2d of May, 1834. This act authorised a re-examination of the whole subject; directed the commissioners to agree upon a plan for introducing a sufficient quantity of pure and wholesome water in the city, and to report the same to the common council.

In the month of July following, the Common Council passed an ordinance appropriating $500 to defray the expenses of re-examining the subject and the commissioners immediately thereafter engaged David B. Douglas and John Martineau, Esquires, civil engineers, to make the necessary surveys and levels of the whole route from the Croton to this city. Mr. Martineau completed his work, and presented his report on the 25th January, 1835, and Mr. Doughlas on the first of February next thereafter—both reports were accompanied with maps and drawings in elucidation on the subject.

The report of the commissioners was presented to the Common Council on the 16th of February, 1835, and in the month of March thereafter, the plan proposed by the commissioners was approved and ordered to be submitted to the electors at the ensuing election for charter officers, in April; and it was adopted by the electors by a large majority of eleven thousand three hundred and sixty-seven votes.

In the month of May following, the Common Council passed an ordinance instructing the commissioners to proceed with the work, and authorised the creation of a public stock or fund, to defray the expense of carrying the said plan into effect.

On the 2d day of June thereafter, the commissioners appointed David B. Doughlas, Esq. their chief engineer, and directed him to organise a proper corps of engineers as soon as practicable. He reported as necessary to form said corps, 5 engineers, including himself, 5 rodmen, and 7 laborers and chainmen, who were duly appointed by the commissioners. The party, consisting of 17 persons, proceeded to the field of operation, and commenced work on or about the 6th day of July, 1835. They were directed first to run and stake out a line around the reservoir, to be formed by damming the Croton; the line to include one rod of land above that which would be overflowed by the backing up of the water of the river, and George W. Cartwright, Esq. was engaged to survey the land that would thus be overflowed, and to furnish the commissioners with maps of the quantity belonging to each individual.

They were next directed to stake out the line of the aqueduct from the Croton to the Harlem river, and also the width of the land required for building said acqueducts and culverts, and forming the necessary excavacations and embankments.

The commissioners are not authorised to use any of the land necessary for the works until it is acquired either by purchase or by appraisers appointed for the purpose by the chancellor. It was, therefore, important that they should be put in possession of proper maps of the land, both of that necessarily to be overflowed, as well as that on which the acqueduct was to be built, in order that they might inform the owners of the quantity wanted, and be prepared to negotiate with them for its purchase.

The quantity of land to be overflowed was furnished the commissioners by Mr. Cartwright, in the month of November, 1835, and they immediately commenced negociations with the owners for its purchase. They were enabled to purchase of the land around the Croton reservoir, two hundred and forty-one acres forty-four hundreths, and there still remain to be purchased or to be acquired through the intervention of commissioners, two hundred and fifty-four acres forty-eight hundreths.

The engineers spent the whole summer of 1835 at field-work, and did not leave that work until about the eighth of January, 1836. A party was then formed for office duty during the winter, consisting of eight persons, including the chief engineer.

The necessity of possessing the maps of the land, on the line of the acqueduct, was repeatedly urged on the attention of the engineers, but they were not completed when the time arrived for the party again to take the field, which was on the 11th of April, 1836. The whole line of acqueduct has been resurveyed during the present summer, being the fourth survey and level of the line under the direction of the present engineer, and as a reason why the maps were not prepared at an earlier day, we are informed by Mr. Douglas that some important improvements had been made in the course of the aqueduct, that would shorten the distance, and lessen the curves, and it was therefore only on the 11th of June, 1836, that we were put into possession of a portion of the aforesaid maps, and the remainder of them was furnished on the 17th of the same month.

The number of persons composing the engineer corps, now consists of seven engineers, including the chief, eight rodmen, and four chainmen and laborers, making a total of nineteen persons.

During the session of the legislature of 1836, a very strong remonstrance was presented to that honorable body by some of the inhabitants of Westchester, against the provisions of the act, authorising the necessary land to be taken by commissioners, and complaints were also made to the water commissioners, by others, that the act of the 2d of May, 1834, did not sufficiently secure their rights. The first complaints proposed,

1st. That the legal possession and the use of the land should remain with the original owners, after being paid for by the corporation.

2d. That if the land was not used for the aqueduct, after being paid for, it should revert back to those from whom it was obtained.

3d. That provision should be made to prevent trespasses on the property of the inhabitants.

4th. That the persons through whose land the aqueduct passed, should have the

right to use the water, by allowing reasonable compensation for it.

5th. That the judges of the county courts should act as appraisers, instead of commissioners appointed by the vice chancellor.

The second complainants contended that the corporation ought to be prohibited from using the land required under the act for any other purposes than that of supplying the city with water, and should it not be used for said purpose, that it ought to revert to the person from whom it was taken, he paying back the sum received for it.—That necessary fences should be erected and sustained by the corporation, and convenient passes made under and across the aqueduct, where it intersects the land of an individual owner.

The remonstrance to the legislature by the first complainants, was effectually opposed by the commissioners, and no order was taken on it by that honorable body; but the complaints of the second appeared to the commissioners reasonable, and an act was accordingly passed on the 26th of May, 1836, embracing the aforesaid provisions, to which the commissioners could see no objections.

The commissioners were in hopes that the passage of the aforesaid act, would convince the people of Westchester that they were anxious to secure to them every right and privilege that could be reasonably required. It appears, however, that there are still dissatisfied persons among them, as by the proceedings of a meeting lately held at Tarrytown, it is said, a remonstrance in the form of resolutions was passed, which, among other inadmissible demands, declares in substance that the taking of their lands will be resisted and carried up to the supreme court of the United States, unless the corporation will agree to indemnify the citizens of Westchester from all damage they may sustain by taking their lands, together with all such other damage as may accrue to them now and hereafter; intended no doubt to include any loss they may sustain by theft or other crimes committed by persons employed on the works. If this is not the meaning, why is it that they oppose the act of 1834, which provides compensation for all damage sustained in taking the land or water or affected thereby? The 13th section declares that "In case of disagreement between the commissioners and the owners of any property which may be required for the said purpose, *or affected by any operation connected therewith*, as to the amount of compensation to be paid such owner, the vice chancellor of the first circuit may, upon the application of either party, nominate and appoint three *indifferent* persons to examine such property, and to estimate the value thereof, *or damage sustained thereby*."

How in justice more can be required than what the law provides, the commissioners are unable to perceive. If the corporation agreed to the demands made in the resolutions said to be passed at the meeting alluded to, it would in effect, as the commissioners view it, amount to the proclaiming of a premium for the commission of crime; for how many men would be found, under such circumstances, scrupulous about taking from another, what they wanted, if they knew they were not to be prosecuted for it; or how many of the people of Westchester are there who would take the trouble of prosecuting for any losses, when in order to be indemnified, they would only have to present their bills to the city comptroller for the payment of such loses?

The citizens of New-York, it is admitted, will be greatly benefitted, but at a very heavy expense. They are not the only portion of the community, however, who will reap advantage from the project. The city of New-York is the principal mart of these United States, and those who send the produce of their farms to this market for sale, or who come there for the purpose of purchasing domestic or foreign produce, will enjoy, as well as our own citizens, the benefit of a plentiful supply of an element of the first necessity, from the use of which they can feel assured that no injury will ensue to the constitution or the health of the partaker.

The county of Westchester is more particularly interested in this matter than any other portion of the State, except the city, and that in several ways.

First, by the increase of the population and prosperity of New-York, she is insured a good and unfailing market for all the surplus produce of the county.

Second, the land required for the work is chiefly of second rate quality, the price paid for it will be liberal, and will produce a greater income to the owner than what would be realized from its cultivation; and

Third, the large amount of money that will be expended in the county, will naturally tend to increase the trade of the place, and thereby not only benefit the farmer, but the merchant and mechanic also.

The unfortunate prejudices engendered by the proceedings alluded to, have prevented the commissioners from bringing any farther negociation for the land required to a favorable issue, and they have accordingly applied to the vice chancellor for the appointment of commissioners to take by appraisement some pieces of land belonging to James Griffin, James Palmer, Zophar Palmer and Joshua Purdy, lying in the vicinity of the site for the Croton dam, which application has been acceded to, and the business is believed to be in a progressive state.

It will be seen from the above that the principal obstacle now in the way of proceeding with the work is the difficulty to be overcome in obtaining the necessary land. The commissioners, however, are still in hopes that after the proper explanations shall be made to the inhabitants of Westchester, most, if not all these difficulties will be removed.

At a meeting of the commissioners on the 23d of July, 1836, the chief engineer was required to furnish them with plans and specification of the Croton aqueduct, the several tunnels throughout the line of aqueduct, the several embankments on said line, the several culverts on the said line the Croton dam, the piers and bridges for crossing the Harlem river, &c. with proper descriptions of the materials to be used, the manner in which they shall be worked together, and other necessary information preparatory to the making of the contracts; which he has promised to furnish as soon as practicable and the commissioners are in hopes that if they succeed in obtaining the land, to estimate the value of which commissioners have been appointed, and shall receive from the engineers the necessary plans and specifications, they will still be enabled to place some part of the work under contract before the close of the present year.

All which is respectfully submitted.

STEPHEN ALLEN,
BENJAMIN M. BROWN,
WILLIAM W. FOX
CHAS. DUSENBBRRY,
SAUL ALLEY,
} Water Commissioners.

Office of the Water Commissioners, August 1st, 1836.

From the Albany Argus.

THE GEOLOGICAL SURVEY OF THE STATE.—It will be generally recollected that the legislature at the last session, made provision for a geological survey of this State, including an account of its botanical and zoological productions. This important measure was to be executed under the direction of the Governor, by competent persons to be appointed by him The outlines of a plan for this work, together with a specification of the objects to be embraced in it, were submitted to the legislature in an able and excellent report, made to that body by Gen. Dix, as Secretary of State. This plan has, with some inconsiderable alterations, been adopted by the Governor. The State is divided into four districts, and one principal geologist and an assistant assigned to each, instead of two geologists, as suggested in the report made by Gen. Dix.

It was supposed that it would be necessary to have a draughtsman for each district, but it is believed that a change in this respect can be advantageously made. The geologist and his assistant will be able to execute all the ordinary drawings, and the services of only one draughtsman will be required to execute the more difficult parts of this branch of the work. An accurate, minute and uniform analysis of the minerals, including mineral waters, and of the various soils of the State, has been deemed of great importance, and will be of evident utility. To ensure the best result in this respect, and to prevent the repetition of the same labor to some extent at least by each geologist, this department of the work has been committed to one person. The Governor has, we believe, taken great pains to secure to the State the services of persons in all respects well qualified for the duties assigned them; and has almost completed the list of appointments.

John Torry, M. D., Professor of Chemistry and Botany in the College of Physicians and Surgeons, New-York, &c., is appointed Botanist, and is to execute the botanical department of the survey.

Lewis C. Beck, Professor of Chemistry and Botany in the New-York University, &c., is appointed Mineralogist and Chemist, and has charge of that branch of the work which relates to the chemical analysis of the minerals, soils, &c.

James E. De Kay, M. D. author of numerous papers on the Geology and Zoology of theUnited States, has charge of the Zoological Department.

William W. Mather, for several years Professor of Mineralogy and Geology in the Military Academy at West Point, is appointed principal geologist to execute the survey of the first district. His assistant has not yet been selected. The first district is composed of the following counties—Suffolk, Queens, Kings, Richmond, New-York, Westchester, Rockland, Putnam, Dutchess, Orange, Sullivan, Delaware, Ulster, Greene, Columbia, Rensselaer, Albany, Schoharie, Schenectady, Saratoga and Washington.

Ebenezer Emmons, M. D., professor of natural history in Williams College, has been appointed principal geologist for the second district. James Hall, instructor in the Rensselaer School at Troy, is appointed the assistant. This district contains the counties of Warren, Essex, Clinton, Franklin, Hamilton, St. Lawrence and Jefferson.

Timothy A. Conrad, outhor of a work on the "Fossil shells of the Tertiary formations of the U. S.;" Monograph of the American Uniodeæ, &c. is appointed principal geologist for the third district; and Geo W. Boyd, M. D., curator of the N. Y. Lyceum of natural history, is appointed his assistant. This district includes the counties of Montgomery, Herkimer, Oneida, Lewis, Oswego, Madison, Onondaga, Cayuga, Wayne, Ontario, Monroe, Orleans, Genesee and Livingston.

The fourth district includes the counties of Otsego, Chenango, Broome, Tioga, Cortland, Tompkins, Seneca, Yates, Steuben, Allegany, Cattaraugus, Chautauque, Erie, and Niagara. Lardner Vanuxem, late professor of chemistry and mineralogy in Columbia College, South Carolina, has been appointed principal geologist for this district. The assistant has not yet been selected.

The following is a copy of a circular which the Governor, has furnished to the persons employed in the survey:

Albany, 25th July, 1836.

Sir—I take the liberty to introduce to you one of the gentlemen employed in executing the geological survey of the State, directed by the legislature at the last session. The importance of this measure in respect to our general prosperity, and particularly to the interests of the people in those sections of the State which are supposed to contain mineral productions, or in which valuable discoveries may be made, will, I trust, secure to them a favorable consideration in every place to which their duties may lead them. I confidently anticipate a readiness on the part of the inhabitants in every section of the State, to render to the persons engaged in this work, such assistance as will facilitate its execution.

The assistance which the geologists will be desirous of receiving, will, I presume, relate principally to information concerning localities which are interesting as connected with the objects of the survey—to the collection of specimens—and to the facilities which they may require in conducting the more difficult part of their researches. Those who are disposed to contribute in any manner to the accomplishment of this useful work, will no doubt be willing to confer with the public agents as to the manner in which they can best carry into effect their good intentions.

It may be that in the course of their researches, these agents will wish to extend their examinations beyond the surface of the earth. This will, in some instances at least require labor which it will not be in their power to perform. The legislature made no provision for an expenditur for such purposes, and unless those who may be immediately interested, should be willing to bestow the labor required in such cases, the advantages that might result from such examinations cannot be attained at present.

A careful and complete geological survey of the State, including a minute and accurate analysis of its minerals and soils, together with an account of its botanical and zoological productions, such as was designed by the legislative, is an undertaking of much labor, and although executed in the most economical manner, will be attended with great expense; but both of these, however, will be considerably dimished, if the gentlemen engaged in carrying this measure into effec should receive, as I hope, they will, the co-operation of public spirited individuals in various parts of the State.

Permit me to solicit from you such facilities in the prosecution of this undertaking, as you may find it convenient to grant to those who have been employed in executing it.

I have the honor to be, with great respect, your obedient servant,

W. L. Marcy.

From the Cultivator, for August.

PLANTING.—No. II.

Of the soils and situations most proper for planting, the treatise which we are consulting, "*Useful and Ornamental Planting*," particularizes—

1. Exposed waste lands, and those that are steep, rocky and precipitous. The loss to individuals, and to the nation, by such large tracts of land lying utterly unproductive, is incalculable.

2. Lands of better quality, which are unproductive by reason of their exposure to bleak winds. Cases are cited, where lands altogether unproductive before, have been brought to produce good corn and pasture, merely by a judicious disposition and arrangement of belts of trees to shelter the ground, and thereby ameliorate the climate.

3. Where the local soil and climate are good, a scarcity of timber exists, or is likely to exist soon, for the periodical wants of agricultural and manufacturing operations. Here the planting may be confined to the angles of enclosures, belts on the exposed borders of the farm, as to the north, northwest and north-east, the bleak points of the farm-buildings, the borders of permanent divisions, and the highway side.

Every soil and climate are naturally adapted to the growth of particular species of trees. These indications of nature should be consulted, and trees growing naturally on similar soils in the neighborhood, or under a like temperature, should be selected. The work before us gives the analysis of various soils which had been planted as woodland, and indicates the trees which have flourished best upon each. On a sandy heath soil, containing but three parts in 400 of clay, incumbent on ferruginous stones, the Scotch fir, (*Pinus sylvestris*,) birch and beech succeeded well, and the last best when the subsoil was a deep sand. A poor sandy soil, seven parts in 400 of clay, was found congenial to the growth of the pine, larch, sycamore, &c. A sandy loam, with nine parts in 400 of clay, grew the larch and fir tribes luxuriantly, and also the beach. On a light sand, incumbent on clay, the oak and chesnut did well, and the elm tolerably so. A clay loam, on a clay subsoil, brought the oak to the highest state of perfection. On a damp clayey soil, incumbent on clay, the oak, elm, ash and horn-beam, attained to great perfection, and the tulip tree (whitewood,) grew free when the ground was trenched. A rich alluvial marsh soil, containg 32 parts in 400 of clay, and 40 of vegetable matter, is said to be capable of growing all kinds of trees, at least the following were found to thrive extremely well, viz. willow, alder, (some of the European species of these, grow to trees,) elm, sycamore, ash, locust, birch, oak, horse chesnut, Spanish chesnut, horn-beam, lime, &c.

In selecting trees for a plantation, reference should also be had to quickness of growth and value of product. Where it is exempt from the borer, these qualities are found eminently combined in the common locust, (*robina pseudo-acacia*,) with the further advantage, that it multiples rapidly by its roots. The oak, ash, beech, maple, walnut, baswood, plane, chesnut, elm, and many other native decidius trees, are readily propagated by seed, and afford profitable timber and wood. Of the coniferous trees, the seeds of several species of pine, larch, and fir, indigenous and exotic, may be readily procured. The Scotch pine and larch are particularly of thrifty growth, and are useful in the arts and on the farm.

The relative growth of several kinds of trees, during 17 years after planting, is shown below, as ascertained on a plantation of the Duke of Bedford, in England, upon porous soil. The measurement was meant to indicate the medium size, individual trees being found much larger. The last column of figures shows the height at which the several kinds are usually planted out, from nursery beds, in Great Britain.

	Girth or circumference at 2 feet from the ground.	Do. do at 7 feet.	Height in inches when planted.
Poplar,	41 inches	37 inches	18 to 36
Larch,	37 do	32¼ do	6 to 24
Pine,	32¼ do	25¼ do	6 to 20
Elm,	32 do	26 do	9 to 30
Silver fir,	28¼ do	25 do	8 to 20
Spruce,	27 do	22 do	
Chesnut,	27 do	22 do	12 to 30
Birch,	25 do	20 do	9 to 30
Sycamore,	24 do	20 do	6 to 30
Beech,	23 do	21 do	6 to 20
Oak,	23 do	13 do	6 to 30
Ash,	20 do	17 do	6 to 20

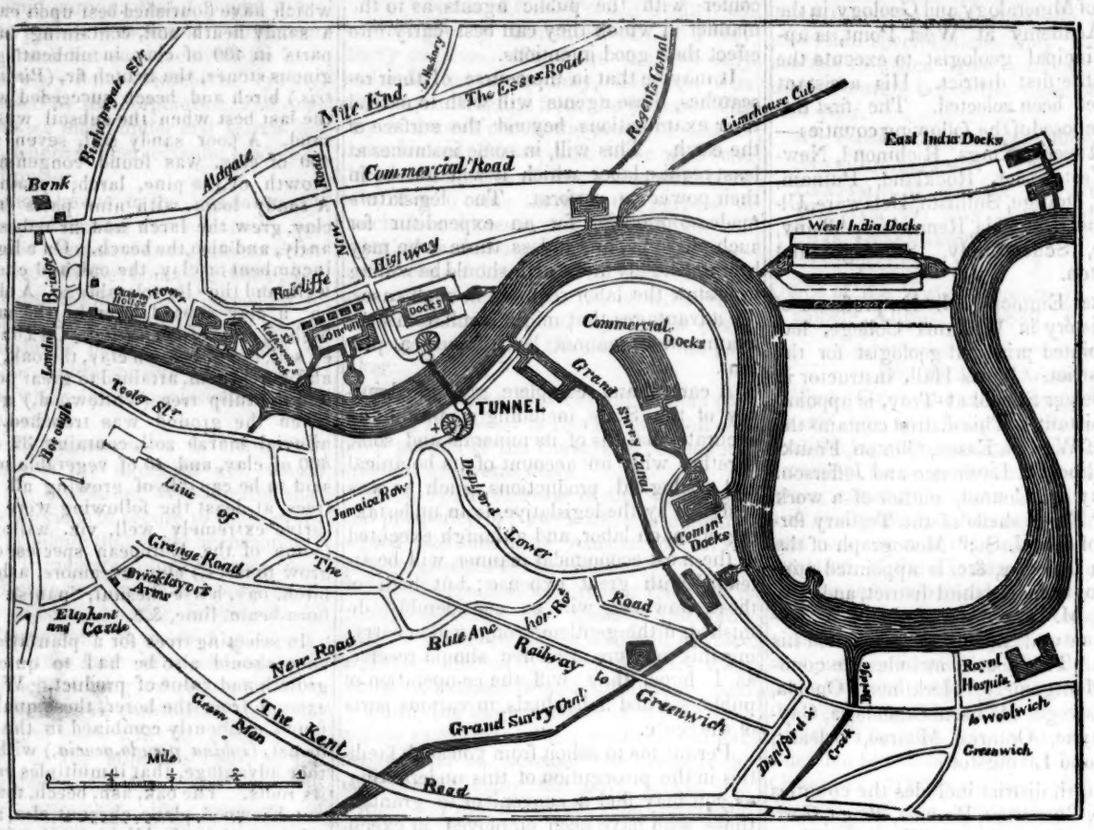
INTRODUCTION TO A VIEW OF THE WORKS FOR THE TUNNEL UNDER THE THAMES FROM ROTHERHITHE TO WAPPING.

(Concluded.)

The annexed plan will show the situation of the Tunnel with reference to the main roads leading to it.

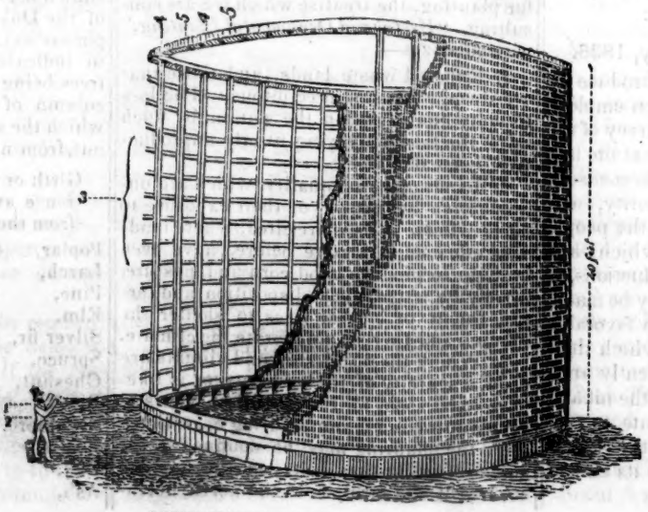
The distance from
- London Bridge along Tooley Street is 2 miles.
- The Great Kent Road - - - - - - - - - 1½
- Greenwich Church by Deptford Creek 2½
- Mile End Turnpike - - - - - - - - - - 1½
- The Bank of England - - - - - - - - 2

To facilitate the access to the Tunnel for the large population in its immediate neighborhood, it is intended to make the carriage descents circular, and they will not exceed in any part the slope of Ludgate Hill, or Waterloo Place, Pall Mall.



The shaft, from whence the Tunnel works are carried on, was built at Rotherhithe in the form of a tower, 50 feet in diameter, 40 feet in height, and 3 feet thick, at about 150 feet from the edge of the wharf, and it was sunk into its position by excavating the earth within. In the annexed sketch the brick-work is supposed to be broken open, to show its construction, and the numbers below refer to the different parts of that "tower," which now forms the shaft, and is intended finally to be occupied by an easy double flight of granite steps, for the use of foot passengers through the Tunnel.

1.1. The wooden rings or flat curbs.
2. The iron curb.
3. Hoops or laths binding together the uprights.
4.4. Iron rods enclosed in wood } screwed tight to the top and
5.5. Wooden rods - - - - - - } the bottom curb.



drinks of the best wines that the Champagnes of France produce, as deeply as Mynheer Van Dunk, and with as perfect impunity—that he entertains his friends with a grace that even gives a charm to his entertainment—lives up to his income, yet keeps out of debt; travels like a prince, and never challenges the bill——when we have said all this, we have said all. His virtues and vices, his toils and his pleasures are, alike, set down, and the Agricultural Society may foot them up at pleasure. To him it matters not much what is the precise character of the soil which he cultivates—he asks not the history, he observes not the constitution of the plant from which comes all his revenue.—It is not his concern upon what principle of mechanics his workmen, his horses, mules and oxen, apply their labor; nor does he deem it his part to know by what particular tenure he holds his lands—or upon what great principle, his rights, as a citizen, are maintained. He is too apt to avoid all trouble and concern on these topics. Public opinion expects from him no knowledge on any of them, and he may live in total ignorance of the whole history of his own country, past and present, yet, in no wise offend the judgment of those who move around him. Let him but pay his taxes, he may vote—let him but speak civilly, he is a good citizen—let him but show a whholesome warmth on the subject of his public relations, he is quite as pure a patriot as any in the republic.

Nor, in public and national respects only, may he live in utter ignorance, and live without offending popular opinion.—Contract the sphere of your observation, and see him at home. He may be totally uninformed of those matter which more immediately pertain to his own plantation and its government—sometimes, indeed, he may be even found to despise them, as unbecoming in him to notice, or unworthy of his esteem. And this course of conduct, though in such exceeding bad taste, would call for no rebuke from the general feeling, and would, indeed, rather accord with, than revolt, the public opinion. We are somehow strangely given to regard all labours which employ time, and compel exertion, as inconsistent with a proper gentility.—Noble blood will not trade in merchandize—can it be expected that noble blood will sow and reap, and devise modes and means by which the arts of sowing and reaping shall be strengthened and improved? There must be a revolution in our thoughts, in our habits of thinking, before we can hope for improvement. Our planter, himself, must make a change—he must not wait for the spirit of enlightenment—he must go forth and seek it. Public opinion must keep pace, and go with him in such a pursuit, for, whatever may be the achievements of the individual, he will inevitably fall back into old lethargies, unless stimulated by the belief that the world around goes with him—that all are stirring in the same fields, and that if he does not push forward inflexibly, fearlessly, thoughtfully, he will be left behind in the grand march of enterprize, alone—stagnating and stiffening—where he stands.

The exertion must come from the planter and the planter only. The movement of other craftsmen will never move him.—He must move himself. With us, he is the man who gives the tone to public sentiment. Why? He is the great proprietor known to the country. The capital of our State exists in the soil, and the serfs who work it. They are his. He wields that capital, and that capital makes our feelings, our opinions, our character. To plant is to engage in the highest craft known to our people. It is the object of ambition with all. It would not be so if the influence of the planter were an iota less in business and society.

How does he employ this influence? Let him ask himself the question. Could he make it greater—could he employ it in making a better population among our inferior classes, and what should be the aim of the moral man in his direction of the vast moral power which he certainly may wield over our society, and through it over our institutions? There are other questions which it may serve him beneficially honestly to analyze, and justly to resolve upon. Why is his influence less now, than what, under a proper direction of his energies and thoughts, it might become? The evil and the error is with him. He has himself to blame—none other. The man who places a low estimate upon his own pursuits, cannot surely complain that others receive him at his own valuation. He has suffered the mechanic to regard his craft with more respect, and to direct more of heart and mind to the promotion of it, until he learns to love the toil which gives him strength and power. You may see the mechanic with his badges of plane or hammer upon his apron—you will never see the plough drawn upon the panel of a planter's coach. He boasts of his negroes and his hands. Does he take up the hoe and plant himself—does he regard them, as such old and long tried friends might well be regarded, with respectful veneration? We fear not. He will avoid the subject, and is sometimes apt to disparage it. He has not availed himself of that beneficial and blessing Providence, which has given him a mind able to direct the sinews of labour—he has suffered it to lie waste and fallow, until, through neglect, it has grown as bald and barren as the soil which he has impoverished by the opposite extreme of too much use. Had he used the soil less, and the mind more, and used both of them differently, they had, both of them, been more valuable at this moment. It is truly melancholly to think that these are truths which we are writing. It is sad that the planter—he who owns three-fourths of the State's wealth, and all of its political power—who pays more than one-half of its revenue—should be at the same time of so little real public importance. Why will he not consider these things. Why permit the subject to remain uninvestigated. Why not provide a noble answer, in a new design of a proper and masculine exertion?

We shall now seek to show that this degrading condition of things has arisen necessarily from the defective character of our Agricultural Education—if that can be styled education which fits our people for any thing but what they are to become, and any pursuit but the one which most directly lies before them.

What is the education of our young planter—or rather, what is the education of him who is to become a planter? Is it ever adapted to the end in view—is it ever calculated for his pursuit? Is it not radically defective, as it lacks all connexion with the pursuits of his future life, and as it is rather apt to lead his thoughts away from a consideraiton of it into far and foreign channels.

Let us take an example. There is a planter whose resources are such as will enable him to give his children, what is is styled, by a frank republican courtesy, a liberal education. The boy, as soon as he is old enough, is bundled off to school.—The neighboring city receives him, and from the hands of indulgent but watchful parents, he is transferred to the always uncertain care, and the doubtful management of strangers. He goes to be schooled—not with reference to his pursuit as a future agriculturist, but simply with reference to his importance as the son of a wealthy planter. The distinction is wonderful between the education which a poor and a rich boy receives in the world, at school and out of it, when the difference of their condition is known to those about them. It is frequently ruinous to the one—it is often a blessing to the other; but the vanity of a parent would be apt to insist that his son should be treated with a reference to his own importance, and this vanity blinds him usually to the true interests of the boy.—The son, himself, very soon learns to exact rigorously the defference commanded by his father's income; and under circumstances such as these, his education,—that course of preparation which is to bring his native mind into activity, inform it with all necessary and existing knowledge, and counsel it for the labor which in future life it is to take, and the patterns and purposes which his pursuits will require him to adopt—under these circumstances, which prompt self-conceit, stubbornness, and a total want of all method—his education is begun.* He goes to the city, and, in most cases, is suffered to choose his own lodging house, his guardian, and his associates. His caprices take the place of the experience of others, and his first lessons of obedience are fully begun by his having his own way at the beginning. He attends a regular, or, not unfrequently, an irregular teacher, and is himself a most irregular pupil.—He goes through his recitations or not, and as his parent does not often examine, he is not often dissatisfied with the reports of son and tutor. The teacher does not often inquire what shall be the pursuit and profession of the youth. Indeed, he is not often permitted to do so. Nothing can be more arbitrary or so little adapted to the wants or capacity of the boy, as the course of instructton which he put upon. He is required to conjugate Greek and Latin verbs, and a passing glimpse at Greek roots,

* Refer to Gillie's Greece for an excellent summary of the Laconian methods of education.

is all that is ever taught of roots at all to the future agriculturist. He manages, by dint of *driving*, *drilling*, and possibly occasional *dressing*, (all of these italicized words to be used in the technical, school, and not in a plantation, sense) to make his way after a lapse of years into and through the easier authors of antiquity. Without appreciating any of their beauties, and in half the number of cases without comprehending their meaning, he proposes to be, and is, by the courtesy of Professors, ready for admission into college. College! That mysterious institution which is to convert the block into the classcal shapes of ancient models, and imbue the tough and insensate clay with the creative fires of Prometheus. By this time his moral faculties have all become admirably fitted for his admission into walls so sacred. He is free to licentiousness. Rudeness is manliness—obtrusiveness, proper spirit, and violence the only genuine show of high mindedness and a glorious southern fervour. With no parental eye to watch over, to guard his education—his morals and his manners are alike the creatures of his sudden and forward impulses. He has no masters but these last—he has no motive but the indulgence of his long unbridled passions. From college, if not expelled for turbulence and brutality, he passes on to graduation. His education is complete, and he may now choose from all the professions which surround and invite him. Nobody can doubt that he will succeed admirably as a Divine, a Doctor, or a Lawyer—fewer still are there who will venture to deny that he will make a first rate Agriculturist. He, himself, has no doubt upon the subject. He can chop logic with his master, discuss all manner of subjects, quote an occasional passage in the Greek and Latin, blunder over Euclid, and moderately fracture the head of Priscian. He is prepared for life and all its purposes. He is ready to encounter its vicissitudes—his ambition, which is boundless, gives him daring enough to engage in any vocation, and he begins the world, perfectly well educated after the fashion of the time, and destined to add another to the long generations before him, which have lived and died, and left no sign at their departure. He can do nothing for the craft which he adopts—it must degenerate in his hands. He cannot raise his caste—he may impair and possibly degrade it. His country derives no good from his patriotism—an education like his makes an egotist only. Society suffers in his connection, for he subjects it to his caprices.

The cause of this is obvious enough, if we would but see. His education, faulty in all respects, is entirely and doubly so, as it has had no manner of reference to his possible pursuit in life. From the beginning he has been toiling in the dark. Through the whole course of his tuition, though his tutor has probably never forgotten that he was the son of a planter, he has probably never kept the fact in mind that the boy was to become a planter also. Agriculture, its condition, its elements, its instruments, its uses, and connexion with all other topics, has never been insisted upon. It was the very last subject, indeed, which he was likely to hear of at school. If his own mind from previous bias and association, exhibited any tendancy towards the subject, he would in all probability find himself discouraged from any investigation of its principles, and among his city mates, his chance would be great, if he showed any large disposition that way, of being laughed at, for what they would be apt to call his inflexible rusticity. When he assumes the robes of manhood and begins to look about him—confident as he has been before about the universality of his genius he now begins to have misgivings. He is a planter and he is called upon to apply his education to his business. What a discovery is that which shows him, not merely the utterly unprofitable character of his education hitherto, but shows him that he is to begin anew—that now, for the first time, he is really to commence his schooling. What connection had his college education with agriculture—how did it expound its laws—how, explain its principles—how, illustrate its practices and unfold its history? He is now to commence with the elements of his education, when he is engaged in the more serious business of his life. Its doubts and difficulties are all before him, yet he is now to prepare himself for that field of enterprize, in which the self taught adventurer is already reaping wealth, and establishing character.

But we must give way to other matter, and leave our disquisition over to another day.

From the Maine Farmer.

A DISH OF "SCRAPS, ODDS AND ENDS."

MR. HOLMES:—Brother Carolus *thinks* we must "convince" farmers "that the course pursued by our fathers and grandfathers in relation to husbandry, is not the best course"—and he then enumerates a number of particulars, of the truth of which it is necessary to convince them of. That is true, brother Carolus—but how shall we go to work? You say, and say truly, "it would seem that many believe the exercise of the mental and physical powers have no connection in the business of husbandry, that our fathers and grand fathers *thought* all that was necessary for mankind to *think* on the subject, and that nothing remains for us but to *work*, *work*, *work*, without even *thinking* we have the power to *think*."

Now, if I understand the subject aright, so far as writing and reading are concerned, it is in vain for us to *think* of getting people to *think closely* on any subject, unless we can get their attention *closely* fixed upon it. We must interest their feelings. How is this to be done? I answer, by addressing them in such a way as to touch the master springs of human actions. These, though there is a general likeness in human nature, are infinitely diversified. One person likes a short pithy story; and indeed, in this particular there is much uniformity—another is pleased with the solution of some obscure problem, or a long chain of reasoning and argumentation on some favorite topic—another has a relish for poetry, music or painting, &c. For want of attending to these truths some men who have excelled in knowledge in the arts and sciences, have labored almost in vain. Neither their oral or written addresses contain what, in a mental point of view, is well represented by the electric fluid in the world of matter—a living energy—a vitality of thought and feeling, which sets all the elements of the mind in motion. But to apply this subject to agricultural papers and writers, let no one suppose me to mean, that it is necessary every correspondent of the Maine Farmer should be possessed of this exquisite feeling—this fire of the soul—this flow of pathos and sensibility. This is not necessary. People love variety. The appetite of the greatest epicure is palled by his seasoned dishes. The fact is, people love variety, and variety they will have. And one thing we must remember—Man is a bad animal to drive. I frequently think of what a very respectable Quaker once said to me, "Joseph, don't thee know hogs are the most like other folks of any animals in the world.—Gratify their appetites and they will follow almost any where."

But when a man's feelings are once deeply engaged in the pursuit of any calling, he is then prepared to listen to the relation of facts and reasonings on the subject; and what would be insufferably tedious to uninterested feelings, is delightful and pleasant to his more ardent ones. And these views afford a lesson to all the correspondents of the Farmer. Do not think because you cannot write with that fire of thought and feeling which almost makes the ink smoke as it flows from the pen, that your communications are devoid of interest. I do not recollect a single communication in the Farmer, relating to the theory and practice of agriculture, which has been uninteresting to me, and which I have not read more than twenty times over. And to those who have the talent of pleasing, either by a polished, or the happy application of a more common every day style, it calls upon you, in the most emphatical manner, to awake from your slumbers. Oh, Ichabod, awake!

RAISING PORK.

Carolus says, we "must convince farmers that three good cows are better than half a dozen poor ones; and so of all other stock." I once was acquainted with a fact, which illustrates the truth of this sentiment. In the town of Fairhaven and State of Massachusetts, something like twenty years ago, there lived an old gentleman, a neighbor of mine, who was remarkable for raising good pork. One year in particular I remember he bought two pigs in the spring (for I never knew him to winter any swine) and killed them the same autumn or beginning of winter. I cannot tell exactly their age when killed, but my reccollection is very clear, that they were not much over ten months if any. One of them weighed three hundred and eighty pounds or something over, and the other fell short a few pounds, say five or six, of the weight of his mate. These were barrows. Some two or three years after, his son after his decease, killed a sow, about the same age, that weighed 320 lbs. She was a small

boned hog, but I thought quite as fat as those killed by the old gentleman.

I can say but little how they managed with their swine, but can state one fact which, perhaps may enlighten the reader as much as the whole story, could he hear it. I saw the son one day feed his, and as he then had leisure he gave his sow a little at a time, as long as she would eat, and left a little, which he scraped out clean and put back in his pail. The food at that time was a very nice pudding made of boiled potatoes, mashed and minced with meal. My inference from this fact is, it was his principle to cook the food, and then give them as much as they would eat and no more.

The old gentleman sold one half of one of his hogs for 12 1-2 cents a pound without salting. Assuming this price as the value of each pork in that market, at that time, and allowing his two hogs or pigs to weigh 750, the two were worth when killed $93 37 1-2. Now had these two swine weighed only 200 each at the age these were killed, they must have been good meat, but we could not allow them to have been worth at that time, in that market, more than ten cents a pound. This would only have made them worth $40, and the excess gained by extra care in feeding, &c. $53 37 1-2.

From the Maine Farmer.

DAIRYING.

The first and very important measure is to provide a sufficiently large and convenient dairy house, whether the object be butter or cheese. It should be proportioned to the number of cows, and be sufficient for performing all the necessary operations without embarrassment.—"Much attention must be paid to cleanliness in every thing that relates to it, such as the shelves, floors, and different implements which are made use of, by daily scalding, scrubbing, rinsing, and drying, in order to prevent any sort of acidity taking place; for without due regard in these respects, it is impossible that the produce can be of superior quality, or such as will keep sweet and good for any length of time. Cleanliness is the least indispensable part of good management." "A Farmer may have the most valuable breed of cows, and they be fed on the richest pastures, but unless cleanliness prevail in the dairy, his butter or cheese will never stand high in general estimation."

This building should be placed over a cool spring, and trees planted round it for shade. Where there are no springs, the house should be built near the dwelling house, and an ice house close to it. All the utensils connected with the dairy, must be kept perfectly clean. The milk pans may be of any convenient width, but not to exceed *four inches in depth.*

"The milk should be strained *into the pans as soon as possible* after it is taken from the cow, and with as little *agitation as possible*, and where the dairy is large a pail full, as soon as milked, should be strained into the pans. Great loss is sustained by agitation and cooling, and this mode more particularly enables the owner of the dairy to separate the good milk from the bad. Without such attention the whole of his dairy products may be greatly depreciated by the milk of one bad cow." The quantity of butter must depend on the quality of the milk, as well as the management of it; it is therefore important to separate the inferior quality of milk in the first instance, as it secures the best quality of butter: and the inferior may be converted into the use that is found most profitable. There is not only a difference of milk in different cows, but a *difference in the same cow.*—For a more perfect view of this subject, the reader is referred to the Maine Farmer for 1st July.

The following is the opinion of Dr. Anderson, a contributor to the Bath Papers on agriculture. "The writer is satisfied from experience and attentive observation, that if in general, about the first drawn half of the milk is separated, at each milking, and the remainder only set for producing cream, and if that milk is allowed to stand to throwing, the whole of its cream, even till it begins sensibly to taste sourish, and if that cream is afterwards carefully managed, the butter thus obtained will be of a quality greatly superior to what can be usually obtained at market, and its quantity not considerably less, than if the whole of the milk had been treated alike. This therefore is the practice that is thought most likely to suit the frugal farmer, as his butter, though of a superior quality, could be afforded at a price that would always insure it a rapid sale."

THE DEGREE OF HEAT PROPER TO RAISE THE MOST CREAM.—The precise heat has not been fixed by experiment, but "from the trials that have been made on this subject, it is believed, that when the heat, is from 50 to 55 degrees in Fahrenheit's Thermometer, the separation of cream from milk proceeds with the greatest regularity, and in the most favorable manner. When the heat exceeds 60° the operation becomes difficult and dangerous; and when it falls below 40° the operation can scarcely be carried forward with any degree of economy or propriety."

ON THE PROPER TIME FOR SKIMMING MILK.—It is the opinion of some of the English writers, "that for *very fine butter* the milk ought not to stand more than 6 or 8 hours; for *ordinary good butter* 12 hours or more."

SKIMMING.—This requires a dexterity that can be acquired only by practice, but it must be well done, for if any part of the cream is left, the quantity of the butter will be diminished, and if part of the milk is taken, the quality will be the worse for it.

THE MODE OF KEEPING CREAM.—When the cream is separated from the milk, it ought to be put *immediately* into a vessel by itself. No vessel can be better adapted for this purpose than a neat made wooden barrel, in size proportioned to the extent of the dairy, open at one end, with a lid exactly fitted to close it. Close to the bottom, should be placed a cock, for drawing off, from time to time, any thin serous part of the milk, that may have generated, which, if allowed to remain, acts on the cream, and greatly diminishes the richness in the quality of the butter. The inside of the opening should be covered with a bit of close fine wire, to keep the cream back while the serous is allowed to pass; the top of the barrel should be inclined a little forward.

ON THE TIME OF KEEPING CREAM BEFORE CHURNING.—Epping butter is in high repute for its superior quality, and "the cream is seldom kept above 3, or at the furthest 4 days, but always till there is a certain degree of *acidity* in the cream either *natural or artificial*, as without it they cannot ensure a good churning of butter; some keep a little old cream for this use, otherwise a little rennet."—

In Suffolk in a large dairy, with a high character for making butter of a superior quality and where the butter was to be sent *directly* to market, the cream was churned the second or third day, but when it was to be salted, it was kept a day or two longer, or till it had acquired a certain degree of acidity. The reason assigned was, "that butter from the freshest cream was better and pleasanter to the taste, but that which was kept longer would take the salt better."

From the result of the experience in England, and experience and observation in this country, it is well ascertained, that *acidity* in the cream is absolutely necessary before butter can be produced. It is for this reason that it is difficult to produce good butter in winter. Heating the cream with warm water is a common practice, and it is a long while before the butter is produced, and is usually white, hard, and bitter, with very little taste. The writer has in times past mixed, in winter and spring, used a small quantity of vinegar which has never failed to produce of a good effect. But the Epping practice of using rennet is recommended. If acidity in the cream is necessary, and this is acquired by standing, the following course is suggested to prevent the churning of *new* and old cream at the same time.

If the dairy is large and cream is churned three times in the week four vessels to hold cream should be provided and two day's cream put into one, say Monday's and Tuesday's, and churned after the acidity has taken place, and the amount of the acidity must be regulated by experience.—An extract from Dr. Anderson will close this head. "The separation of butter from cream, only takes place after the cream has attained a certain degree of acidity. If it is agitated before the acidity has begun to take place, no butter can be obtained, and the agitation must be continued until the sourness is produced, after which the butter begins to form. In summer, while the weather is warm, the beating may be continued until the acidity is produced, so that butter may be got; but in this case the

process is long and tedious, and the butter for the most part, of a soft consistence, and tough and gluey to the touch. If this process is attempted during the cold weather in the winter, butter can scarcely be in any way obtained, unless by the application of some great degree of heat, which sometimes assists in producing a very inferior kind or butter." The judicious farmer should not attempt to imitate such practice, but allow his cream to remain in the vessel for keeping it, until it has acquired that proper degree of acidity that fits it for being made into butter with great ease, and by a very moderate degree of agitation; by which process only very fine butter can be prepared.

CHURNING.—The process of churning is necessary to force out the serous fluid from the cream in order to produce butter. This is done by agitation and in a churn. There are various kinds of churns, but the best churn is the one that will preserve the proper temperature, or the same temperature that is in the churn and cream when put into it. In warm weather cold water for some time is to be put into the churn, and in cold weather scalding water, and also putting hot or cold water in the cream according to the season. As it is important to preserve the same temperature while churning—the best churns are those which are used in an horizontal position—such as stationary barrel with dashes to move in the inside. A small churn is in use on this principle, and answers a good purpose, as a hole of sufficient size from one half an inch to an inch, may be made on the top, to let out the warm air produced by the agitation of the cream, and to admit the cool air. A barrel churn of this kind has been used, when 36 to 38 lb. butter was made twice a week. An extract from Dr. Anderson is given to show great care is needed in churning.

"In the process of churning greater niceity is required, than most persons are aware of, a few hasty irregular strokes may render the whole of the butter of scarcely any value, and, but for this circumstance would have been of the first quality."

MAKING UP THE BUTTER.—It is not necessary to describe the common mode of preparing the butter for market, when taken from the churn. The object is to take from the butter all the serous liquor—which is done by letting it off, and washing the butter by the change of water until it is pure, and not discolored. The advantage of the churn above recommended is going throuh this process without the use of the hand—and working the butter after it is separated from the serous liquor. Even the salt may be worked in, in the churn. If butter worked in a barrel churn where was put ½ an ounce of sugar, salt petre and salt to a pound of butter into the churn and when well worked it was put in thin layers in firkins with another ½ onuce of the above spread on each layer. This butter was sent to the West Indies, and a firkin was kept until the vessel returned with lumber from a Southern port, and was in prime order.

It is agreed by all good butter makers "unless the milk is *entirely taken away*, the butter will infallibly spoil in a short time, and if it be *much worked* the butter will become tough and gluey, and it should be salted *as soon as the milk is removed*."

C. V.

From the Genesee Farmer.

OMITTED DEPREDATORS, BY OBSERVER.

MR. TUCKER—I perceive that a correspondent of your valuable journal has been furnishing you some papers on those beasts, birds, and insects, that detract so largely from the profits of the husbandman; but there are two of the most prominent ones he seems to have overlooked, and the object of this paper is to bring them before the readers of the Farmer, that their just deserts may be awarded. The first of these nuisances and pests of the farmer, is the Dog. Altogether they are most worthless and useless. Take them from the highest to the lowest, from the mastiff to the lap-dog—puppy, whelp, hound, and cur-dog—all should by the farmer be placed under the ban of proscription, and banished from the premises. To use a common phrase, they all cost more than they come to; and if they are sometimes found useful, such instances are the exception, not the rule. That the dog has exhibited at times noble qualities, I do not deny; but the question with the farmer is one of profit and loss, and if he keeps a dog he should keep him for the same reason that he keeps a horse or an ox, because he is profitable. But, says one, "I cannot do without a dog; I must have one to drive hogs from my door, my yard, or my sheds; I must have one to keep my own creatures and those of my neighbors' out of mischief; to watch my house and barn and keep off thieves and vagrants." Well, then, keep a dog, but let me tell you that if you rely on a dog fence, neither your dog or yourself will find the business of keeping creatures out of mischief a sinecure. No, kill your dog, and instead of relying on him, put up your fence as a farmer should—do not leave rails off, or your fences down, to invite cattle to be unruly; kill your dog, and my word for it, unless your experience should be very different from mine, the two barrels of soap you may annually make from what your dog would eat—that is, if he is properly fed at home, and not left to prowl over the neighborhood and steal his living—will more than pay for all you will have stolen from you. It is a fact which will not admit of dispute, that the dogs in this State will kill more sheep, and in this way injure the farmer more than all the wolves to be found in our limits, and to reward the killing of which, much money is and has been annually paid; and more human lives yearly fall before that incurable and frightful malady the hydrophobia, than have been lost by wild beasts since the settlement of the country. I say then, let the dog law of the state be strictly and rigorously enforced, and if a man will keep a dog, or half a dozen of them, to vex and injure his neighbor, let him pay for what he considers such a privilege; and when they are caught trespassing, let the penalty of the law in its length and breadth speedly overtake the depredator.

The other instance of omission on the part of your correspondent to which I have alluded, is in case of an animal that perhaps cannot be better described than in the words of the celebrated Lawrence, who is in his Theory of Life, gives the generic and specific characters thus, viz: "Order, bimanum (two handed); genus, homo; the species, single, with several varieties: characters, erect stature; two hands, teeth approximated and of equal length; the inferior incisors perpendicular; chin prominent; rational, endowed with speech, unarmed, defenceless." Had the learned professor added, "wonderfully addicted to theft," the description would have been complete. The very frequency of this animal's depredations have contributed mainly to the impunity it enjoys. Straddling and shock-headed—idle and vicous in the extreme—it lazily passes the hours of labor, coiled up in the sunshine, or otherwise inviting repose; but no sooner does darkness come on than it rouses its energies, and commences all manner of depredations.—Omniverous in its tastes and habits, nothing comes amiss; and in its tastes and habits, nothing comes amiss; and in its predatory excursions the most incongruous articles are gathered into its receptacle of plunder. Pork from the barrel, butter from the larder, grain from the granary, corn from the field, hams from the smoke-house, fowls from the roost, clothes from the drying-line, melons from the bed, and all kinds of fruit from the tree, are appropriated to their use as inclination may dictate, or opportunity offer. They have been observed to be particularly fond of new things, and in some sections of the country the propagators of rare and valuable kinds of vegetables and fruits, find it difficult to preserve enough from their ravages to furnish a specimen of the kind and quality. A few years since I called on a friend very nice in such matters, and where a number of gentlemen happened to be present. He was showing us his fruit orchard, and among other rare specimens, exhibited to us a new plum, which he valued very highly, and which then had several nearly ripe and beautiful looking on the tree, the first it had borne. While describing the reported qualities of the fruit to us, a bare-footed and wild looking animal of this depredating kind approached; and listening to what was said, no sooner had we left the tree to taste a delicious peach, than with a most mortifying dexterity he seized on the valued plums, which speedly disappeared in his capacious gullet, leaving the owner to wait another year for the uncertain privilege of fully testing the qualities of his own fruit. All good citizens should unite to check at once the operations of the light fingered pilferers; and as the law is fortunately in this case on the side of the honest man, nothing seems to be wanting but active co-operation, and a vigorous enforcement of its salutary provisions.

METEOROLOGICAL RECORD

For the month of February, 1836, kept at Avoylle Ferry, Red River, La., (Lat. 31° 10′ N. Long. 91° 59′ w,.) by P. G. VOORHIES.

FEBRUARY.

Days.	Morn.	Noon.	Night.	Wind.	Weather.	REMARKS.
1	32	48	36	calm	clear	heavy white frost
2	30	52	51	..	..	. . .
3	36	60	59	..	..	. . .
4	34	49	46	..	..	. . .
5	40	64	61	..	cloudy	. . .
6	41	61	42	..	..	. . .
7	41	68	61	..	..	. . .
8	33	61	60	..	..	. . .
9	47	62	60	..	..	rain in the morning and all day
10	56	70	65	..	..	rain and heavy thunder—storm all day and night
11	58	70	62	SE	..	Red river rising
12	65	60	58	S	..	rain all day and all night
13	64	62	52	N	..	rain in the morning and clear at noon, Red River on a stand
14	40	63	46	calm	clear	
15	42	68	65	..	..	Red River falling
16	38	64	56	..	..	
17	57	74	68	..	cloudy	light showers all night
18	59	69	59	..	clear	
19	50	71	68	..	..	
20	53	74	67	..	..	cloudy in the evening
21	56	68	64	..	..	
22	60	68	61	S	cloudy	rain all day, clear at night
23	57	69	59	calm	clear	
24	57	72	66	..	..	
25	56	51	50	SE	..	cloudy evening, rain at night
26	50	48	50	NW	cloudy	
27	36	50	51	NE	..	drizzling rain all day and all night
28	40	48	45	..	clear	
29	55	69	71	calm	cloudy	drizzling rain in the evening

Red River fell this month 4 feet 5 inches—below high water mark 9 feet 3 inches.

METEOROLOGICAL TABLE

For the month of March, 1836, kept at Avoylle Ferry, Red River, La., (Lat. 31° 10′ N., Long. 91° 59′ w.) by P. G. VOORHIES.

MARCH.

Days.	Morn.	Noon.	Night.	Wind.	Weather.	REMARS.
1	56	50	43	SE	cloudy	high wind from the north at night
2	32	54	43	calm	clear	heavy white frost
3	32	59	53	..	..	. .
4	34	61	50	S	..	. .
5	43	67	56	calm	..	. . cloudy at noon
6	59	69	68	S	cloudy	high wind from south-east all night and heavy rain
7	57	62	47	N	..	rain all day
8	41	61	52	calm	clear	Red River rising
9	46	62	47	S	cloudy	heavy thunder and rain at noon and all night
10	33	49	47	W	clear	heavy white frost—high wind all day
11	33	64	75	calm	clear	heavy white frost
12	43	69	64	SE	..	high wind from the north-west in the afternoon
13	59	71	68	SW	cloudy	high wind all day
14	61	72	65	S	clear	. .
15	66	78	75	SE	..	. .
16	67	80	78	S	..	. very high
17	69	79	72	..	cloudy	rain and heavy thunder at noon
18	58	68	62	calm	..	rain all night, Red river on a stand
19	60	64	52	..	..	drizzling rain all day and all night
20	46	47	46	..	..	. .
21	48	52	47	..	clear	
22	41	50	45	..	..	
23	34	48	45	SE	..	
24	44	56	48	..	..	
25	48	58	46	calm	..	
26	45	61	57	..	..	
27	43	60	58	..	..	
28	48	71	68	..	..	
29	65	68	70	..	clondy	drizzling rain all day
30	64	74	76	..	..	
31	64	70	66	..	..	rain at noon

Red River rose this month 1 foot 6 inches—below high water mark 7 foot 9 inches.

CLOVER LEYS.

It will undoubtedly be remembered that innumerable experiments have proved that clover leys, turned under, make an admirable dressing for a crop of wheat the next year. Clover, if we mistake not, is a biennial—that is, lasting but two years, after flowering and going to seed the second summer, the roots begin to decay, and ultimately die out and leave the soil for the Herd's grass, or other plants which may be sowed with the clover. Hence it will be well, in order to make the most of the roots as a dressing for wheat, to plough them under as early in the season after haying as can conveniently be done. By the following spring the sod has become decayed, and in a good state to promote the growth of the future crop.

Anderson recommends that Cows be milked three times a day in summer when full fed. If a Cow is not milked dry each time, the quantity diminishes; and if milked dry, the best milk is obtained. The first cream which rises is the best.

TO CANAL CONTRACTORS.

Office of the Sandy and Beaver Canal Co., July 25th, 1836.

Proposals will be received at the office of the Sandy and Beaver canal company, in New Lisbon, Columbiana county, Ohio, until Monday the 10th day of October next, for the construction of about 50 cut stone locks, 17 dams, (varying from 5 to 20 feet in height) one aqueduct across the Tuscarawas River, several bridges, and about 10 or 15 miles of canal.

Plans and specifications of the work may be examined at the Engineers office, New Lisbon.

Persons unkown to the Engineer must accompany their proposals with good recommendations.

B. HANNA, President.

E H. GILL, Chief Engineer. 30—to 10

TO CONTRACTORS.

Sealed proposals will be received at Jackson, until the 15th day of September next, for the graduation, masonry and bridging of the 3d division (50 miles) of the Mississippi Railroad.

This road is located on a pine sandy ridge, the country is healthy, and provisions can be readily obtained at all seasons of the year.

The whole line (150 miles) will be placed under contract, as the location advances next fall; and it is believed that no institution can offer greater inducements to good Contractors than this.

F. H. PETRIE, Chief Eng.

ENGINEERS OFFICE, Natches, June 10, 1836.

28—till Sep. 5.

TO CONTRACTORS.

ENGINEER DEPARTMENT, Lawrenceburgh and Indianapolis Railroad Company, June 20, 1836.

PROPOSALS will be received at this office until the 8th of August for the graduation and masonry on the first division of the Road.

This division commences near the Ohio River at Lawrenceburgh, Indiana, and follows the Valley of Tanners Creek a distance of ten miles.

Plans and Profiles of the Route and proposed works can be examined at the Engineers Office, Lawrenceburgh, Dearborn County, Indiana.

28—tau15 JULIUS W. ADAMS, Engineer.

TO CONTRACTORS.

PROPOSALS will be received at the Office of the Eastern Railroad Company, Boston, between the 28th and 30th inst., for the grading and masonry of said Road from East Boston to Newburyport, a distance of 33¾ miles

The line of this road is along a favorable country, passing through Lynn, Salem, Beverly, and Ipswich, which places will afford contractors every facility for obtaining provisions, &c. Plans and Profiles will be ready, and may be seen at the Office, after the 22d instant.

Satisfactory recommendations must accompany the proposals of those who are unknown to the Engineer.

JOHN M. FESSENDEN, Engineer.

22—t30

RAILWAY IRON, LOCOMOTIVES, &c.

THE subscribers offer the following articles for sale.

Railway Iron, flat bars, with countersunk holes and mitred joints,

						lbs.	
350 tons	2½	by	½,	15 ft in length,	weighing	$\frac{68}{100}$	per ft.
280 "	2	"	½,	"	"	$3\frac{50}{100}$	"
70 "	1¾	"	½,	"	"	$2\frac{1}{4}$	"
80 "	1½	"	½,	"	"	$1\frac{25}{100}$	"
90 "	1	"	½,	"	"	½	"

with Spikes and Splicing Plates adapted thereto. To be sold free of duty to State governments or incorporated companies.

Orders for Pennsylvania Boiler Iron executed.

Rail Road Car and Locomotive Engine Tires, wrought and turned or unturned, ready to be fitted on the wheels, viz. 30, 33, 36, 42, 44, 54, and 60 inches diameter.

E. V. Patent Chain Cable Bolts for Railway Car axles, in lengths of 12 feet 6 inches, to 13 feet 2¼, 2¾, 3, 3¼, 3½, 3¾, and 3¾ inches diameter.

Chains for Inclined Planes, short and stay links, manufactured from the E. V. Cable Bolts, and proved at the greatest strain.

India Rubber Rope for Inclined Planes, made from New Zealand flax.

Also Patent Hemp Cordage for Inclined Planes, and Canal Towing Lines.

Patent Felt for placing between the iron chair and ston- block of Edge Railways.

Every description of Railway Iron, as well as Locomotive Engines, imported at the shortest notice, by the agency of one of our partners, who resides in England for this purpose.

Mr. Solomon W. Roberts, a highly respectable American Engineer, resides in England for the purpose of inspecting all Locomotives, Machinery, Railway Iron &c. ordered through us

A. & G. RALSTON.

28-tf Philadelphia, No. 4, South Front st.

TO CONTRACTORS.

Engineer Department York and Maryland Line Railroad Co.

YORK, JULY 10, 1836.

PROPOSALS will be received until Saturday, the 30th inst. in York, for the graduation and Masonry of the whole line of this road, extending from the State line to York, a distance of nearly 20 miles. This road is a continuation of the Baltimore and Susquehannah Railroad, and is the final letting on the line of Railroad from York to Baltimore. On this letting is a Tunnel of about 300 feet in length.

Persons unknown to the undersigned must accompany their proposals with recommendations.

ISAAC TRIMBLE, Chief Engineer.

WM. GIBBS M'NEILL, Consulting Engineer.

July 15, 1836. 28—t30

OFFICE PONTCHARTRAIN, RAILROAD CO. New Orleans, 19th May, 1836.

THE Board of Directors of this Company, will pay the sum of five hundred dollars to the inventor or projector, of a machine or plan to prevent the escape of sparks from the Chimney of Locomotive Engines, burning wood, and which shall be finally adopted for use of the Company. No further charge to be made for the right of the Company to use the same.

By order of the Board,

JNO. B. LEEFE, Secretary.

28—3m.

NOTICE TO CONTRACTORS.

PROPOSALS will be received by the Morris Canal and Banking Company, at the Engineers Office, Meades Basin, from the 1st to the 4th of August next, for the excavation, embankment, and mechanical work on the Long Pond Feeder, a distance of five and a half miles. Also, for the erection of a stone dam, and other work, near the outlet of Long Pond. Plans and Specifications of the work may be seen a the Engineers office, after the 1st of August.

R. B. MASON, Engineer.

29—tlaug.

HARTFORD AND NEW HAVEN RAILROAD.

The H. and N. H. Railroad Company, are prepare to make immediate contracts for 200,000 running fe t of Southern yellow pine, to measure six inches squa e and from eighteen to thirty feet in length; of th quality best suited to receive a flat iron rail,—th above to be delivered at New Haven by the fir t day of May next. Also for 200,000 running feet n addition, to be delivered by the first day of Septemb r 1837, at Hartford or Middletown.

PROPOSALS may be addressed to

ALEX. C. TWINING, Engineer.

New Haven, July 19th, 1836. 29—3t.

FRAME BRIDGES.

THE subscriber would respectfully inform the public, and particularly Railroad and Bridge Corporations that he will build Frame Bridges, or vend the right to others to build, on Col. Long's Patent, throughout the United States, with few exceptions. The following sub-Agents have been engaged by the undersigned who will also attend to this business, viz.

Horace Childs,	Henniker, N. H.
Alexander McArthur,	Mount Morris, N. Y.
John Mahan,	do do
Thomas H. Cushing,	Dover, N. H.
Ira Blake,	Wakefield, N. H.
Amos Whitemore, Esq.,	Hancock, N. H.
Samuel Herrick,	Springfield, Vermont.
Simeon Herrick,	do do
Capt. Isaac Damon,	Northampton, Mass.
Lyman Kingsly,	do do
Elijah Halbert,	Waterloo, N. Y.
Joseph Hebard,	Dunkirk, N. Y.
Col. Sherman Peck,	Hudson, Ohio.
Andrew E. Turnbull,	Lower Sandusky, Ohio.
William J. Turnbull,	do do
Sabried Dodge, Esq.,	(Civil Engineer,) Ohio.
Booz M. Atherton, Esq.	New-Philadelphia, Ohio.
Stephen Daniels,	Marietta, Ohio
John Rodgers,	Louisville, Kentucky.
John Tillison,	St. Francisville, Lous'a.
Capt. John Bottom,	Tonawanda, Penn
Nehemiah Osborn,	Rochester, N. Y.

Bridges on the above plan are to be seen at the following localities, viz. On the main road leading from Baltimore to Washington, two miles from the former place. Across the Metawamkeag river on the Military road, in Maine. On the National road in Illinois, at sundry points. On the Baltimore and Susquehanna Rrailroad at three points. On the Hudson and Patterson Railroad, in two places. On the Boston and Worcester Railroad, at several points. On the Boston and Providence Railroad, at sundry points. Across the Contocook river at Hancock, N. H. Across the Connecticut river at Haverhill, N. H. Across the Contocook river, at Henniker, N. H. Across the Souhegan river, at Milford, N. H. Across the Kennebec river, at Waterville, in the state of Maine.—Across the Genesse river, at Mount Morris, New-York, and several other bridges are now in progress.

The undersigned has removed to Rochester, Monroe county, New-York, where he will promptly attend to orders in this line of business to any practicable extent in the United States, Maryland excepted.

MOSES LONG.
General Agent of Col. S. H Long.

Rochester, May 22d, 1836. 19y-tf.

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation, and now almost universal use in the United States, (as well as England, where the subscriber obtained a patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

*** All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Troy, N. Y., July, 1831.

*** Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 222 Water street, New-York; A. M. Jones, Philadelphia; T. Janviera, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes. (1J23am) H. BURDEN.

AMES' CELEBRATED SHOVELS, SPADES, &c.

300 dozens Ames' superior back-strap Shovels
150 do do do plain do
150 do do do cast steel Shovels & Spades
150 do do Gold-mining Shovels
100 do do plated Spades
50 do do socket Shovels and Spades.

Together with Pick Axes, Churn Drills, and Crow Bars (steel pointed,) manufactured from Salisbury refined iron—for sale by the manufacturing agents,

WITHERELL, AMES & CO.
No. 2 Liberty street, New-York.
BACKUS, AMES & CO.
No. 8 State street, Albany

N. B.—Also furnished to order, Shapes of every description, made from Salisbury refined Iron. 4—ytf

MILL-DAM FOUNDRY.

TO BE SOLD OR LEASED the above well known establishment, situated one mile from Boston. The improvements consist of,

No. 1. *Boiler House*, 50 feet by 30 feet, containing all the necessary machinery for making boilers for *Locomotive* and other steam Engines.

No. 2. *Blacksmith's Shop*, 50 feet by 20, fitted with cranes for heavy work.

No. 3. *Locomtive House*, 54 feet by 25, used for putting together Locomotive Engines. Several of the best Engines in use in the United States have been put in this establishment.

No. 4. A three story brick building, covered with slate, 120 feet by 46, containing two water-wheels, equal to 40 horse power; Machine Shop, filled with lathes, &c.; Pattern Shop; Rolling Mill and Furnaces, capable of rolling 4 tons of iron per diem, exclusive of other work; three Trip Hammers, one of which is very large; engine for blowing Cupola Furnaces, moved by water-wheel; one very superior 12 horse Steam Engine, which could be dispensed with; and a variety of other machinery.

No. 5. An Iron Foundry, 80 feet by 45 with a superior air Furnace, and two Cupolas, Core oven, Cranes, &c. fitted for the largest work. Attached to the Foundry is a large ware-house, containing Patterns for the Castings of Hydraulic Presses, Locomotive and other Steam Engines, Lead Mill Rolls, Geering, Shafts, Stoves, Grates, &c. These were made of the most durable materials, under the direction of a very scientific and practical Engineer, and are supposed to be of great value.

No. 6. A building, 65 feet by 36, containing a large stack of chimneys, and furnaces, for making Cast Steel. This building has been used as a boarding-house, and can accommodate a large number of men.

No. 7. A range of buildings, 200 feet long by 30, containing counting room, several store rooms, a Brass Foundry, room for cleaning castings, a large loft for storing patterns, stable for two horses, &c. &c.

The above establishment being on tide water, presents greater advantages for some kinds of business than any other in the United States. Coal and Iron can be carried from vessels in the harbors of Boston, to the wharf in front of the Factory, at 25 to 30 cents per ton. Some of the largest jobs of iron work have been completed at this establishment; among others, the great chain and lift pumps for freeing the Dry Dock at the Navy Yard, Charleston.

The situation for Railroad work is excellent, being in the angle formed by the crossing of the Providence and Worcester Railroads. The Locomotive "Yankee," now running on the latter road, and the "Boston," purchased by the State of Pennsylvania, were built at these works. With the Patterns and Machinery now in the premises, 20 Locomotives, and as many tenders, besides a great quantity of cars and wagons, could be made per annum.

For terms, apply to
THOS. J. ECKLEY, Boston,
or to ROBERT RALSTON, Jr. Phila.
Boston, April 21, 1835. j25—4t

☞ THE NEWCASTLE MANUFACTURING COMPANY, incorporated by the State of Delaware, with a capital of 200,000 dollars, are prepared to execute in the first style and on liberal terms, at their extensive Finishing Shops and Foundries for Brass and Iron, situated in the town of Newcastle, Delaware, all orders for LOCOMOTIVE and other Steam Engines, and for CASTINGS of every description in Brass or Iron RAILROAD WORK of all kinds finished in the best manner, and at the shortest notice.

Orders to be addressed to
MR. EDWARD A. G. YOUNG,
feb 20—ytf Superintendent, Newcastle, Del

NOTICE TO CONTRACTORS.

JAMES RIVER AND KANAWHA CANAL.

PROPOSALS will be received at the Office of the James River and Kanawha Company, in the City of Richmond, from the 15th to the 23rd day of August, for the construction of all the Excavation, Embankment and Walling not now under contract, together with nearly all the Culverts and the greater portion of the Locks between Lynchburg and Maidens' Adventure.

The work now advertised embraces the twenty miles between Columbia and the head of Maidens' Adventure Pond, the eight miles between Seven Island Falls and Scottsville, and about twenty isolated sections, reserved at the former letting, between Scottsville and Lynchburg.

The quantity of masonry offered is very great—consisting of about two hundred Culverts of from three to thirty feet span; nine Aqueducts, thirty-five Locks a number of Wastes, with several farm and road Bridges.

General plans and specifications of all the work, and special plans of the most important Culverts and Aqueducts, will be found at the offices of the several Principal Assistant Engineers on the line of the Canal.

The work will be prepared for examination by the 25th July; but mechanics, well recommended, desirous of immediate employment, can obtain contracts for the construction of a number of Culverts at private letting.

Persons offering to contract, who are unknown to the subscriber, or any of the Assistant Engineers, will be expected to accompany their proposals by the usual certificates of character and ability.

CHARLES ELLET, Jr.,
Chief Engineer of the James River and Kanawha Company.

NOTE.—The Dams, Guard-Locks, most of the Bridges, and a number of Locks and Culverts, are reserved for a future letting. Persons visiting the line for the purpose of obtaining work, would do well to call at the office of the Company in the city of Richmond, where any information which they may desire will be cheerfully communicated.

The valley of James River, between Lynchburg and Richmond, is healthy. (20—ta18) C. E. Jr.

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to.

Also, CAR SPRINGS.

Also, Flange Tires, turned complete.

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Builder of a superior style of Passenger Cars for Railroads.

No. 264 Elizabeth street, near Bleecker street, New-York.

RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlaem Railroad now in operation J25tf

ALBANY EAGLE AIR FURNACE AND MACHINE SHOP.

WILLIAM V. MANY manufactures to order. IRON CASTINGS for Gearing Mills and Factories of every description.

ALSO—Steam Engines and Railroad Castings of every description.

The collection of Patterns for Machinery, is not equalled in the United States. 9—1y

NOTICE OF THE NEW-YORK AND ERIE RAILROAD COMPANY.

THE Company hereby withdraw their Advertisement of 26th April, in consequence of their inability to prepare in time, the portions of the line proposed to be let on the 30th June, at Binghampton, and on the 11th of July at Monticello. Future notice shall be given, when proposals will be received at the above places, for the same portions of the road.

JAMES G. KING, President.
21—tf

ARCHIMEDES WORKS.

(100 North Moor street, N. Y.)
NEW-YORK, February 12th, 1836.

THE undersigned begs leave to inform the proprietors of Railroads that they are prepared to furnish all kinds of Machinery for Railroads, Locomotive Engines of any size, Car Wheels, such as are now in successful operation on the Camden and Amboy Railroad, none of which have failed—Castings of all kinds, Wheels, Axles, and Boxes, furnished at shortest notice.

H. R. DUNHAM & CO.
4—ytf